



Citronella Essential Oil (*Cymbopogon nardus* or *Cymbopogon winterianus*)

What It Is

Citronella essential oil is steam-distilled from the leaves and stems of citronella grass, a tropical plant native to Southeast Asia (primarily Ceylon/Sri Lanka type from *C. nardus* and Java type from *C. winterianus*). It has a fresh, citrusy, lemony-grassy scent with woody undertones. It is pale yellow and is best known as a natural insect repellent, though it also offers antimicrobial, deodorizing, and uplifting aromatic properties.

Key Chemical Components

- **Citronellal** (often 30–35% or higher) — main active compound for repellent and antimicrobial effects.
- **Geraniol, Citronellol, Limonene**, plus smaller amounts of camphene and elemol.

These monoterpenes drive its insect-repellent, antifungal, antibacterial, and aromatic qualities.

Primary Benefits and Uses

1. Insect Repellent (Strongest Evidence-Based Use) Citronella is registered by the U.S. EPA as a biopesticide. It masks scents that attract insects and interferes with their olfactory receptors. Effective against mosquitoes, flies, fleas, and some ticks for 1–3 hours (longer with higher concentrations or when combined with vanillin). Popular in candles, sprays, lotions, and outdoor products as a natural DEET alternative for short-term use.

2. Antimicrobial & Antifungal Shows activity against bacteria (e.g., *S. aureus*, *E. coli*) and fungi (e.g., *Candida*, athlete's foot). Useful in natural cleaning products, surface sprays, air purification, and diluted topical applications for minor skin infections or wound support.

3. Deodorizing & Household Use Neutralizes odors and leaves a clean, fresh scent. Excellent for room sprays, pet areas, shoes, bins, soaps, and DIY cleaners.

4. Aromatherapy & Mood Support Its bright, uplifting citrus aroma may reduce fatigue, promote mental clarity, alertness, and a lighter mood. Used in diffusers for refreshing stagnant spaces and creating an energizing atmosphere.

5. Skin & Scalp Care (Diluted Only)

- May help balance oily skin/scalp, reduce acne, dandruff, or minor fungal issues.
- Potential mild anti-inflammatory and analgesic effects for muscle/joint discomfort in massage blends.
- Supports wound healing and soothes bug bites when properly diluted.

Other Notes Limited strong clinical evidence exists for pain relief, digestive aid, or respiratory benefits beyond traditional/aromatic use. Many claims rely on preliminary studies or folklore.





Common Ways to Use

- **Diffuser/Aromatherapy:** 3–6 drops in a diffuser.
- **Topical Repellent:** Dilute to 1–5% (or up to 10%) in a carrier oil (coconut, jojoba). Patch test first. Add vanillin for extended effect.
- **DIY Insect Spray:** 10–15 drops + 100 ml water + 1 tsp alcohol/witch hazel (shake well).
- **Cleaning:** Add to water-vinegar sprays.
- **Massage/Skincare:** 0.5–2% dilution in carrier oil or add a few drops to lotions/shampoo.
- **Candles & Home Products:** Incorporate during making for scent and repellency.

Blends Well With: Lemongrass, lemon, peppermint, eucalyptus, lavender, cedarwood, geranium, tea tree, bergamot, pine.

Safety & Precautions

- **Always dilute** before skin application — it is highly concentrated.
- **Possible side effects:** Skin irritation or sensitization (especially undiluted). Perform a patch test.
- **Do not ingest** large amounts (small food-grade uses are GRAS, but not recommended as medicine). Inhalation of concentrated vapors may cause lung issues.
- **Avoid** on broken skin, eyes, mucous membranes. Use caution with young children (generally okay on skin >6 months when diluted), pets (especially cats), pregnancy, or breastfeeding — consult a doctor.
- Generally low toxicity and environmentally friendly when used as directed. Store in dark glass, cool, dry place.

Summary

Citronella is a versatile, affordable essential oil prized primarily for natural insect protection and freshening/cleaning applications. Its uplifting lemony scent makes it a staple in aromatherapy and household products. Choose pure, high-quality oil from reputable sources and always follow dilution guidelines. While excellent for repellent and practical uses, view therapeutic claims beyond that with appropriate caution and consult professionals for medical needs.

